

(19d)

## SECOND INTERIM REPORT

### OF THE CANADIAN SECTION OF THE INTERNATIONAL WATERWAYS COMMISSION.

OTTAWA, ONTARIO, April 25, 1906.

Honourable C. S. HYMAN,  
Minister of Public Works,  
Ottawa, Ont.

SIR,—The Canadian members of the International Waterways Commission have the honour to submit the following report:—

At the last joint meeting of the International Waterways Commission held in Toronto, on the 6th and 7th of March, 1906, the chairman of the American section presented the following letter:—

DEPARTMENT OF STATE, WASHINGTON, February 13, 1906.

The Honourable the Secretary of War.

SIR,—Several months ago the State Department and the British Ambassador took up the subject of a possible treaty between the United States and Great Britain relating to the use of the waters of the Niagara River and the preservation of the falls.

On November 13, the Ambassador transmitted to the department a report of the Canadian Privy Council, approved November 2, 1905, which stated a report from the Canadian section of the Waterways Commission stated that the Commission was studying the subject and expected to be able to make a joint report to the Government of the United States and to the Government of Canada before long, recommending the adoption of rules and regulations which would prevent in the future the destruction of Niagara Falls by the use of its waters by manufacturers.

In the report of the American section made to the Secretary of War on December 1, 1905, occurs the following statement: 'The Commission have made good progress in the collection of data bearing upon some of these questions, particularly those relating to the use of water at Niagara Falls.'

On October 20, 1905, the Commission appears to have adopted the following resolution:—

"Resolved, That this Commission recommends to the governments of the United States and Canada that such steps as they may regard as necessary to be taken to prevent any corporate rights or franchises being granted or renewed by either federal, state or provincial authority for the use of the waters of the Niagara river for power or other purposes until this Commission is able to collect the information necessary to enable it to report fully upon the "conditions and uses" of those waters to the respective governments of the United States and Canada.'

The negotiation relating to a treaty on this subject has been suspended awaiting the further report of the Commission, in accordance with the statements to which I have referred. There are many indications of active public interest in this subject, and a joint resolution having in view the preservation of the Falls, pending in the House of Representatives, has been favourably reported by the Committee on Rivers and Harbours. The indications are that if an agreement can presently be reached



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between the two countries as to the action necessary to accomplish the purpose, any legislation to give the agreement effect on the part of the American authorities would receive favourable consideration at the present session of congress and at the present session of the New York legislature.

It seems desirable, therefore, to press forward the negotiations for such an agreement without any avoidable delay. May I ask you to make such a report upon the subject as may furnish a basis upon which the State Department and the Ambassador may take and proceed with the negotiation?

ELIHU ROOT.

The American section then urged that the question of the preservation of Niagara Falls be taken up, before all other subjects as being more immediately pressing.

The Commission spent two days considering the details of a report upon the conditions at Niagara Falls. When the Commission had partly agreed upon the facts, a series of recommendations was suggested by the American section, to the effect that a treaty be concluded between the two countries, wherein it should be agreed to preserve for all time the scenic beauty of Niagara, by pledging each country to cancel all charters, other than those under which works had been actually constructed and by agreeing to prohibit all other diversion of water which is naturally tributary to Niagara Falls, except such as may be required for domestic use and for the service of locks in navigation canals.

The Canadian section opposed any hasty action, and an adjournment was made until the 26th of April at Washington.

Intimation was given at the meeting that unless the Joint Commission was prepared to report promptly, the American section might be called upon to give an independent report, in compliance with the following resolution which had been submitted to Congress:—

‘Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the members representing the United States upon the International Commission created by section four of the River and Harbour Act of June thirteenth, nineteen hundred and two, be requested to report to Congress at an early date what action is in their judgment necessary and desirable to prevent the further depletion of water flowing over Niagara Falls; and the said members are also requested and directed to exert, in conjunction with the members of the said Commission representing the Dominion of Canada, if practicable, all possible efforts for the preservation of the said Niagara Falls in their natural condition,’ and that in that case, it was likely that action would be taken looking to the negotiation of a treaty without further reference to our Joint Commission, and on the 19th of March, the American section made a report to the Secretary of War, which has been transmitted to Congress by the President of the United States, by Message dated March 27 (copy of which is hereby appended marked ‘A’).

In order that you may understand the situation, we desire to give you a short summary of the facts and conditions, as they now present themselves to us:—

The volume of water discharged at Niagara Falls varies from 180,000 cubic feet per second at low stage of Lake Erie, to 280,000 cubic feet per second at high stage of the lake, the mean discharge being 222,400 cubic feet per second at mean level of Lake Erie (elevation 572.86).

There are now five companies engaged in furnishing or preparing to furnish, electricity, two located on the American side and three on the Canadian side of the river, above the falls.

The American companies, when in full operation, will develop about 340,000 h.p. and use about 26,400 cubic feet of water per second, while the companies on the Canadian side, will have a capacity in all, of about 415,000 h.p. and use about 32,100 cubic feet of water per second; the result being that from 27 to 33 per cent of the total



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volume of water which would otherwise go over the falls will be used for power purposes.

It is conceded by the American section that as the diversions of water on the Canadian side, are made at or below the crest of the rapids, they do not affect in any degree the flow over the American fall.

The opinion of experts is that when these works are in full operation, while there will be a noticeable diminution of the water flowing over the falls, it will not have the effect of destroying or seriously impairing the scenic beauty of the falls; indeed, our own engineer is of the opinion that while the limit of development has been reached, even exceeded on the American side, a considerably larger use could be made for power development on the Canadian side, without injury to the falls. With this latter contention, the American engineer does not now agree. Both, however, are of the opinion that this question can be much more definitely and properly settled when the consequence of the present developments has become apparent.

Both the companies whose works are on the American side of the river, viz.: the Niagara Falls Hydraulic Power and Manufacturing Company, and the Niagara Falls Power Company, will distribute all their power in the United States. Two of the companies on the Canadian side, viz.: the Canadian Niagara Power Company, and the Ontario Power Company, intend using a large part of their power on the American side. In fact, the former has laid a wire on the traffic bridge, immediately below the falls, and intends laying wires across the river between Fort Erie and the city of Buffalo. The latter company has laid wires across the river at a point above Lewiston known as the Devil's hole. Neither of these two companies has made any serious effort to distribute its power in Canada. The third company, the Electrical Development Company, are erecting transmission lines as far as Toronto, and intimate their intention to build other lines to supply the western section of the province as far as London.

The Cataract Power Company, who take their water from the Welland canal, and use the escapement at DeCew's Falls, is the only other company operating in the same section; they are at present developing about 14,000 h.p. and use 600 cubic feet per second. This company, together with the Electrical Development Company, can supply all the immediate Canadian demand.

The only condition in the agreement between the Park Commissioners and the three companies operating on the Canadian side at the falls, relating to exportation of power, is as follows:—

‘(11) The company whenever required shall from the electricity or pneumatic power generated under this agreement supply the same in Canada (to the extent of any quantity not less than one-half the quantity generated) at prices not to exceed the prices charged to cities, towns and consumers in the United States at similar distances from the Falls of Niagara for equal amounts of power and for similar uses and shall whenever required by the Lieut.-Governor in Council make a return of prices charged for such electricity or power, verified under oath by any chief officer of the company, and if any question or dispute arises involving the non-supply or prices of electricity or power for consumption in Canada, the High Court of Justice of Ontario shall have jurisdiction to hear and determine the same and enforce the facilities to be given or the prices to be charged.’

It will be seen that this provision, possibly, does not afford much protection; the companies themselves will not be inclined to build transmission lines in Canada while they have a much better market across the river, and no one on this side is at present in a position to demand power. The provision, in our opinion, creates, however, a moral obligation which your government should put itself in a position to enforce. At present, necessarily, if these companies are to be made to pay dividends they must sell their power where there is a market for it; so that to entirely refuse to allow them to export would be ruinous to them and not justified by the existing conditions. The Park Commission will receive a revenue of about \$250,000 a year from the three com-



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panies operating under agreements with them. This sum represents a very small proportion indeed of the yearly value of their franchises. It is estimated that the saving in cost of power at the point of production in favour of falling water over any other method is at least \$25 per h.p. This benefit should be apportioned in a reasonable degree between the producing companies and the general public. It will be a misfortune if the companies holding Canadian charters are not restricted in their exportation by regulations distinctly understood and accepted which will compel them to carry out the spirit of their agreements by distributing power in Canada as demand is created, at reasonable prices. In the opinion of this Commission adequate returns for their investment can thus be secured to the companies, while at the same time the Canadian public will obtain great advantage from the use of this their natural advantage.

If there was a market in our country for one-half the power that could be generated at Niagara, its value put into millions per annum would be sterling, but there is no such immediate demand, and it seems to your Commission that the present purpose of all concerned will be best served by preserving Niagara Falls and at the same time making such provisions as are necessary to insure to our people the benefit of all the cheap power required. If we keep ourselves in a position to control the distribution of the power generated on the Canadian side of the river, it will enable us to supply the requirements of our people for years to come without any future development.

The Dominion Parliament has granted charters to three corporations which are still in force, viz.: the Niagara-Welland Power Company and the Jordan Light, Heat and Power Company, organized for the purpose of diverting water from the Welland river, which water would be taken from the Niagara river by back flow, and the Erie and Ontario Power Company, which would take its water from the Grand river and Lake Erie. These companies seem to be unlimited as regards the quantity of water that they may use or the power they may generate.

Quite irrespective of the question of injury to Niagara Falls, the charter granted to the Erie and Ontario Power Company is subject to the further serious objection that its operation would have the effect of lowering the level of the water in Lake Erie.

As we already have at Niagara and Decew's Falls a development three times the Canadian demand, it would seem to be the sheerest folly to increase the development until our own market requires it. It is very little advantage indeed to this country to develop power which is to be transmitted to the United States. We are therefore of opinion that it would be wise to enter into an arrangement with the United States limiting the amount of water to be used on the Canadian side at Niagara river and elsewhere on the Niagara peninsula to 36,000 cubic feet per second. This will permit of the completion of the works now in operation on the Niagara river to their fullest capacity. It will also permit the Cataract Power Company to continue its operations and will give us a few thousand cubic feet per second for additional developments.

At Chicago, the Americans have built a drainage canal, which when in full operation will use about 10,000 cubic feet of water per second.

The quantity of water required for the purposes of a ship canal is comparatively small, but the character of this drainage canal at Chicago is such as to involve a continuous flow of water which will have the effect of lowering Lake Michigan by over six inches, and Lake Erie by four and one-half inches. The nature of this work may be judged when we state that the expenditure will be some forty millions of dollars, and that power works are in course of construction on the canal which will generate some 30,000 h.p.

As the diversion from Lake Michigan to the Mississippi river is of a much more serious character than the temporary diversions from the Niagara river, it is felt that the amount of water to be taken on the American side of the Niagara river should be limited to 18,500 cubic feet per second.

But, in the opinion of your Commission, the preservation of Niagara Falls is a minor matter as compared with the preservation of the interests of navigation on the Great Lakes.



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Lake Erie, as you know, is a shallow lake, and the navigation interests already represented by capital investments of one thousand millions of dollars are very much alarmed and are very insistent that the interests of navigation should be paramount and that there should be no further diversion whatever for power purposes which will interfere in any way with the mean level of the lakes. On the other hand, the demand for the use of power is growing every day and the time has come when it is absolutely essential that some dominant hand should intervene as between these conflicting interests and settle how and when, if at all, diversion is to be allowed of these boundary waters for power purposes.

It is exceedingly important in the interests of navigation, both to ourselves and the people of the United States, that the diversion by way of the Chicago drainage canal should be limited. It is equally essential in the interests of both countries that no diversion or interference should be allowed in streams crossing the boundary which would interfere with the interests of navigation in either country. It is all important that while we are settling the policy as to Niagara Falls we should at the same time establish certain principles which shall be applied in settlement of all classes of dispute which can arise between the two countries with regard to the use of boundary waters or of streams which cross the boundary from one country to the other.

If our proposal is carried out the diversion will be about as follows:—

## DIVERSIONS ON THE AMERICAN SIDE.

	Cubic feet per second.
Niagara Falls . . . . .	18,500
Chicago Drainage Canal . . . . .	10,000
Total . . . . .	28,500

## DIVERSIONS ON THE CANADIAN SIDE.

	Cubic feet per second.
Niagara Falls and on the Niagara Peninsula . . . . .	36,000

It is quite apparent that no further diversions can be made on the Niagara river without injury to the scenic effect of the falls as a whole, and there should be no further diversion from Lake Erie or any other of the waters of the Great Lakes system which will be injurious to navigation. Your Commission is therefore of opinion that the time has come when it is desirable to make a treaty limiting these diversions, and we have prepared a series of resolutions which we intend to submit at the next meeting of the Joint Commission, as follows:—

Whereas, in the opinion of this Commission it is desirable that the whole question of the uses and diversions of the waters adjacent to the boundary line between the United States and Canada, and the uses and diversions of all streams which cross the international boundary between the said countries should be settled by treaty;

Therefore, this Commission recommend that a treaty be had between the United States and Great Britain, in framing which it should be recognized that—

1. In all navigable waters the use for navigation purposes is of primary and paramount right, and therefore diversions should not be permitted which interfere with such use.

2. The Great Lakes system, on the boundary between the United States and Canada, and finding its outlet by the St. Lawrence to the sea, should be maintained in its integrity, and no diversions of water tributary to such streams should be permitted by either country.

3. Permanent or complete diversions of such waters are wrong in principle and should hereafter be absolutely prohibited. The diversions by the Chicago drainage canal, which is of this character, should be limited to the use of not more than 10,000 cubic feet per second.



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4. Diversions which will not interfere with navigation (elsewhere than at Niagara river or the Niagara peninsula), should only be permitted,

- (a) For 'innocent' uses, viz.: for domestic purposes and for the service of locks in navigation canals.
- (b) Temporary diversions, where the water taken is returned again, only on the recommendation of a joint commission; such diversions not to interfere in any way with the interests of navigation and to be allotted in equal proportions to each country and so that each may have a like benefit.

5. It should be declared to be a principle with relation to the use of all navigable rivers and streams crossing the international boundary that no obstruction or diversion should be permitted, either on such rivers or their tributary streams, which will interfere with the interests of navigation in either country.

6. As to the diversions from Niagara river and on the Niagara peninsula:—

- (a) In the opinion of this Commission it would be a sacrilege to destroy the scenic effect of Niagara Falls unless and until the public needs are so imperative as to compel and justify the sacrifice.
- (b) It is possible to preserve its beauty and yet permit the development on the Canadian side at the Niagara river itself and elsewhere by diversions on the Niagara peninsula to Lake Ontario of water for power purposes to the extent of not more than 36,000 cubic feet per second, exclusive of water required for domestic uses, and for the service of locks in navigation canals.
- (c) It is likewise possible to allow the diversion of waters for power purposes on the American side to the extent of 18,500 cubic feet per second, exclusive of the amount required for domestic uses, and for locks in navigation canals, without serious injury to the scenic aspect of the falls.
- (d) Your Commission are of the opinion, therefore, that for the present the diversions should be limited to the quantities mentioned in subsections *b* and *c*.
- (e) This would give an apparent advantage to Canadian interests, but, as the diversion is not of serious injury to the falls, and does not materially affect the interests of navigation, it is more than counter-balanced by the complete diversion of 10,000 cubic feet by way of the Chicago drainage canal to the Mississippi river.

7. Magnificent as are the scenic effects of the Falls of Niagara, the commercial value of the power which its waters can produce is so very great, and the future need may be so pressing, that, in the opinion of your Commission, it will be sufficient that a treaty with regard to the diversions there should be limited to the period of twenty-five or thirty years.

8. As to non-navigable streams flowing in either direction across the international boundary line, diversions for irrigation or other than 'innocent' uses, be allowed, so that each country shall have an equal benefit from such diversions and that a joint commission shall have power to deal with and regulate such uses.

Suggestions have been made that the mean level of Lake Erie can be raised by the erection of a dam at the mouth of the Niagara river, but to this course strong objection is made by the parties in interest at Montreal and elsewhere who apprehend that the result would be to lower the level of Lake Ontario and the St. Lawrence river. It is admitted on all sides that if such will be the effect the work cannot go on. Your Commission in due course will be able to report upon this important question.

GEORGE C. GIBBONS,  
Chairman, Canadian Section.

W. F. KING,  
LOUIS COSTE,  
Members, Canadian Section.

THOMAS COTE,  
Secretary, Canadian Section.